GERMAN ENGINEERING

max out HR

OPERATION MANUAL

戶外运动信息終端
使用说明书

o-synce.com

Made in China

目录

1. 概述

恭喜您购买本款多功能高级户外手表。
请花上几分钟仔细阅读本指南。
本指南为您提供了重要设置信息，
能够帮助您更好地使用手表的各项功能。

Max out HR 户外手表可显示并计算时间、
温度、气压、海拔和方向。

通过内嵌手指传感器和存储器中额外的相应数据，**Max out HR** 还可以测量您的当前心率。

1.1 气压高度测量说明

Max out HR 手表可测量当前的海拔高度，
并记录气压值（过去 22 小时中每半小时记录一次！），
凭此可为您准确提供未来24小时的天气预报。
（出于安全考虑）如果您需要极为准确的天气信息，
可在网上另外查看官方预报。

Max out HR的特殊性能
Max out HR配有极为精确的测高计和指南针传感器，
不仅可以显示当前海拔，
而且还可以显示累计记录的海拔高度。
测高计中的气压传感器十分精良，
可为您提供更多的天气变化信息，
这对制定户外旅行计划十分重要。

除了可以显示当前的气压（点阵右端）外，还可显示
延时情况和过去22小时每隔半小时的气压变化情况。
用户根据这些信息记录，即可预测天气。
为了能够对天气预测波动进行估计，**Max out HR**还额外
配置了一个十分精准的温度计，可随时显示当前温度。

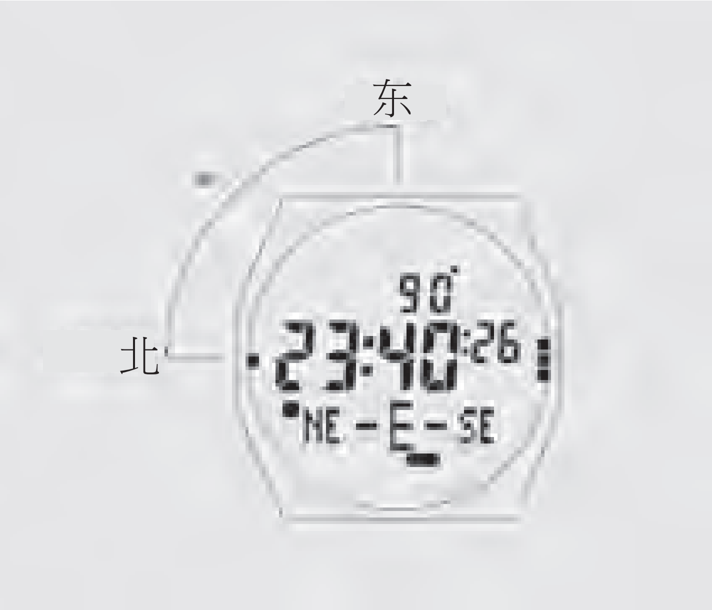
Max out HR 内置测高计的数字压力传感器采用当前最先进的技术。**Max out HR** 压力传感器可根据温度补偿记忆来保存数据。

这是因为海拔测量不仅是由气压所决定，而且还受到传感器温度的影响。

因此，技术人员在压力室模拟了每个海拔高度（-381到+9000 m）上温度（-10到+50 ℃）的相关性。
工程师记录下温度引起的偏差，
并将其储存在微片上。
然后，微片的程序就可以补偿温度差异，
保证为海拔和气压计算提供极其准确的数据。

1.2 指南针导航仪器

指南针是使用磁场来确定方向的导航仪器。
磁偏角随地方不同、时间推移而发生变化。
因此，您必须首先校准指南针，
并在以后每次位置改变后均作校准。
（见3.9）使用指南针功能时，
表盘外环会出现黑色条块，一分钟后消失。
如果您想让条块再次显示，需要按 S/L 键。



表盘上北方显示为一个条块，
南方显示为三个条块。
表盘上的字母显示为当前方向（如 NW-N-NE）。
上侧显示为磁偏角值。所有显示值包括：
当前方位、当地磁场（指南针所指方向）
与地理北极之间的角度，即磁偏角。
当地磁北极在地理北极东面时，磁偏角值为正。
例如，“10°”是指
地磁北极在地理北极逆时针 10 度的方向。

注意：用户必须保持手表水平，
方可得到正确读数。

Max out HR 系统默认为磁方位角而非真方位角，
以使其与依靠磁场运作的系统更为兼容。
根据真位置的磁场来计算北方指向，
数据表给出当前地磁北极的方位和任何
（可能的）当地偏差。**Max out HR** 可显示时间、
日期、星期和年份。还有闹钟、秒表、
倒计时功能。秒表可显示中途时间和每圈时间。
Max out HR 表盘有夜间显示功能。
持续按 EL 键5秒即可。

1.3 使用 Max out HR传感器测量心率

注意：手表可用来监视您的锻炼和健康状况。
出于健康考虑，我们建议在制定
自己的个人心率上下限时先咨询一下医生。
安有心脏起搏器的用户必须事先咨询医生，
方可使用该功能。



总之：
Max out HR 无需胸带，
是一款准确的 ECG 心率监控手表。
在任何模式、任何时间都可进行读数。

注意： 进行测量时，手表必须戴在手腕上。

1. 将食指放在手表的金属上传感器上，
拇指放在下方的按键上。
2. 轻触按键，启动传感器，
表盘上方就会出现跳动的心形图标。
3. 等待约 5 秒后听到嘟嘟声，
心率确认完毕。成功读数后，
您即可看到当前心率。
如果在 30 秒内您没有获得心率读数，
湿润一下指尖再试一次。戴上表后，稍等一会，
待手表背面和皮肤之间形成一层水汽后再测，
可能效果更好。不要过于用力按压传感器.
——如果传感器启动成功，会发出嘟嘟声。
指尖离开传感器5秒后，
手表将恢复到先前模式。

Max out HR 配有热量管理系统。根据记录信息，
您可查看热量消耗和脂肪燃烧数据。
用户需要输入个人资料
（性别、年龄、体重、最高心率和最低心率），
将之记录在案，
并设置心率上下限（见3.5）。

2. 第一步——做好准备

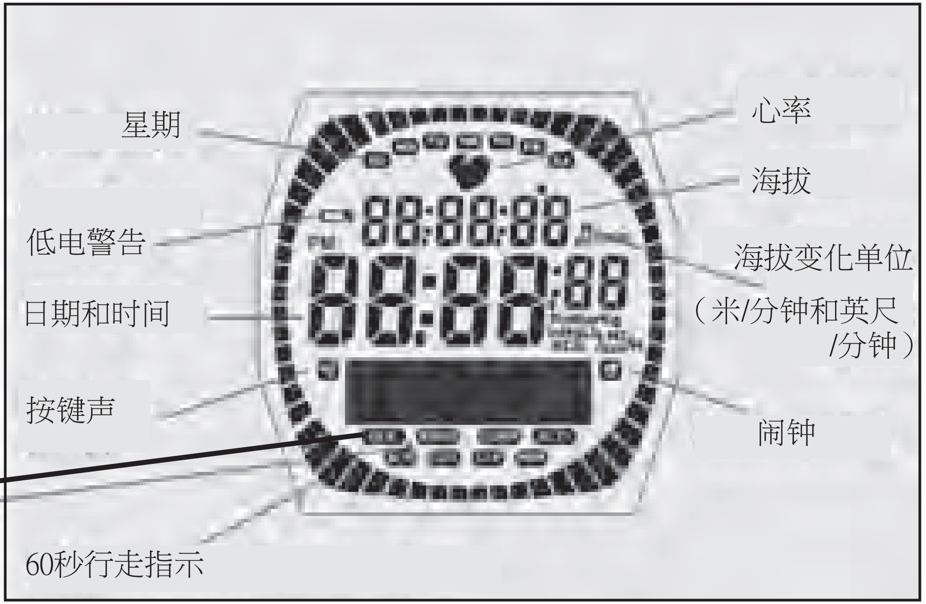
购买 **Max out HR**之后，
手表默认设置为省电模式，
此时表盘不显示任何数据。
按任意键后，**Max out HR** 即可开始使用。

2.1 显示符号及其意义

Clk = 时钟
Baro = 气压计
Comp = 指南针
Alti = 测高计
Alm = 闹钟
Cdt = 倒计时
Stp = 秒表
Mem = 记忆功能

2.2 手表操作

Max out HR 表盘分为三部分：
上表盘、中表盘、下表盘。
每个部分一次显示一个功能，
所以可以同时使用三种功能或查看三组数据。



使用 Mode 键即可调出各主功能。
(使用S/R（停止/重置）键可显示子功能。)
每一次按键都会有按键声（如果设置了该功能）。

下面进行重点描述：（见上面图解）

2.3 按键特殊功能

M　= 按“模式”键
S/L　= 按“启动/单圈”键
S/R　= 按“停止/重置”键
EL　= 按“夜光灯”键
HR　= 按“心率”键直到表盘显示数据
M2　= 长按“模式”键 2 秒
S/L2 = 长按“启动/单圈”键 2 秒
S/R2 = 长按“停止/重置”键 2 秒
EL2　= 长按“夜光灯”键2 秒



设置模式下，按S/L 和 S/R 键可改变所有数值。
S/L 数值增加，S/R数值减少。
(长按时可加速改变数值。)

“启动/单圈”键（S/L）

按此键，可启动秒表并开始记录每圈数值（50 圈为上限）。使用此键也可进入倒计时模式。

“停止/重置”键（S/R）

按此键即可使秒表停止。
长按 2 秒可复位。
单圈时间和所保存的数据将清空为零。

“夜光灯”键（EL）

此键可打开夜光灯，照明时间为 5 秒。
长按则进入夜光灯管理（见3.1）。
设置模式下，按此键则回到原机显示。

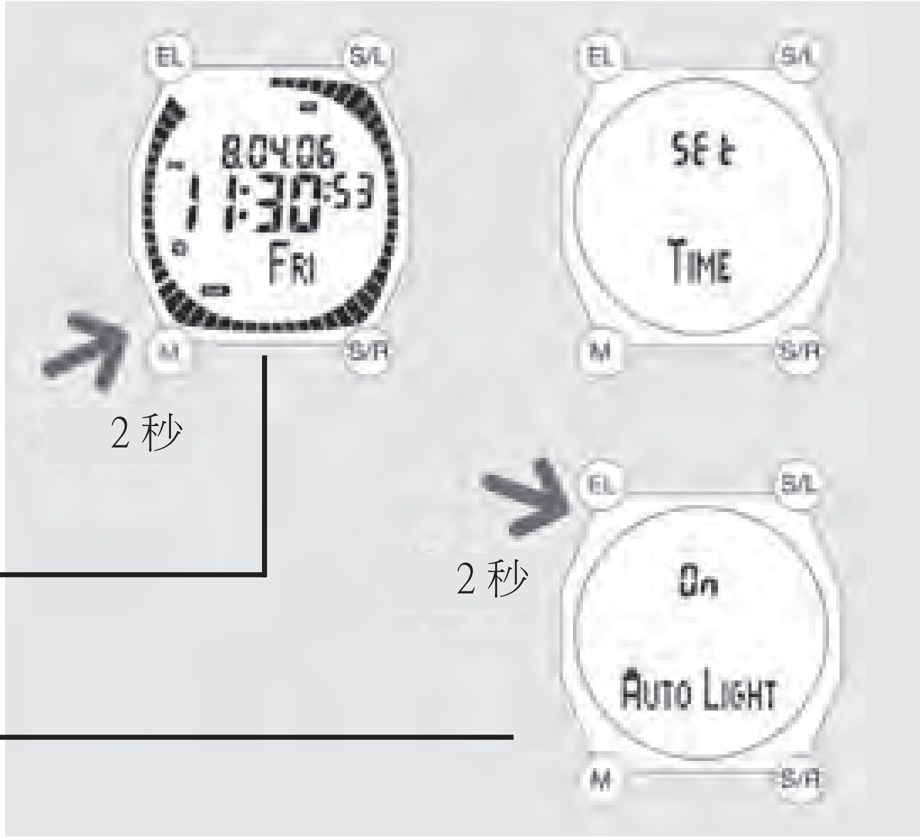
“模式”键（MODE）

使用“模式”键，可进行各种设置。
个人设置完成后，
再次按此键进行确认。

电极/心率按钮
手表面上下有两个传感器垫。
测心率时需要两个手指同时按下约 5 秒。
测量时手表必须戴在手腕上。

3. 基本设置

注意：对手表进行设置时，秒表必须清空为 0.



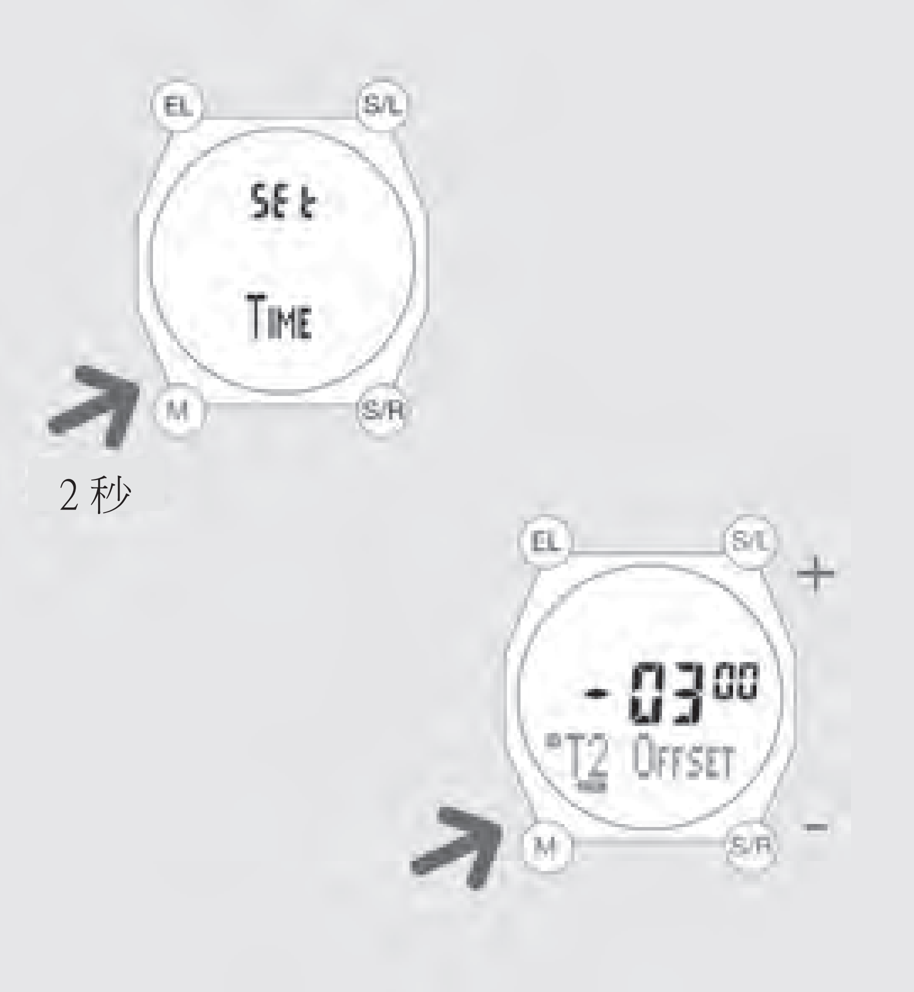
设置模式
在所有显示模式下，都需要长按M 键 2 秒打开主设置模式，按 EL 键则离开该模式。

按键声/蜂鸣器
如果设置了蜂鸣器，会出现一个小图标。
在“Time”模式下按S/R 键可设置/取消蜂鸣器，图表也会随之出现/消失。

3.1 夜光灯管理
长按 EL 键2秒可打开/关闭该功能。
在接下来的 5 个小时内（或夜光灯管理关闭前），按任意键表盘会有 5 秒照明。
再次长按 EL 键 2 秒，显示“off auto light”，即关闭夜光灯管理。

3.2 设置时间和日期
“TIME”模式下长按 M 键 2 秒。
注意：如果看到“RESET STP”字样，需要停止设置，在打开 TIME 模式设置前重置秒表。

3.2.1 设置第二时间
再次按下 M 键。“T2 offset”模式
可设置时区时差，一次间隔 30 分钟（加/减）。
按 S/L 或 S/R 键设置完毕后，
按 M 键确认然后进行下一设置。



3.2.2 设置时间模式

按 S/R 键可选择 12 或 24 小时时钟的选择方式。



3.2.3 设置时间

设置完日期后可设置时间。按 S/L 或 S/R 键进行设置，然后按 M 键确认继续。

时间

数值范围：= 00:00 — 23:59 或 01:00 — 12:59 AM/PM

年

数值范围：

= 00-99 (2000 – 2099)

按 S/L 或 S/R 键进行设置，

然后按 Mode 键确认。



月

数值范围：= 1-12

按 S/L 或 S/R 键进行设置

按 Mode 键确认



日

数值范围： = 01-31

按 S/L 或 S/R 键进行设置

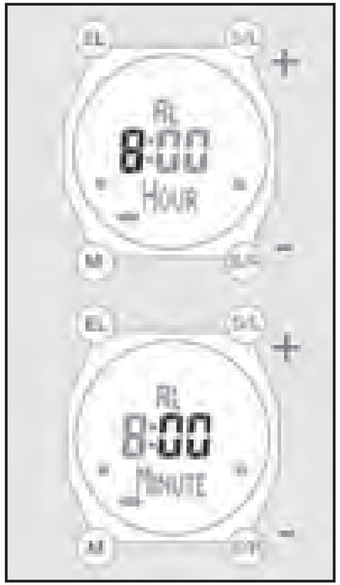
按 Mode 键确认



3.3 设置闹钟

“TIME”模式下，长按 Mode 键 2 秒，直到表盘显示出“Set time”。按 S/R 键，表盘显示“S/R”，然后按 Mode 键确认。

数值范围：= 00:00 — 23:59 或 01:00 — 12:59 AM/PM



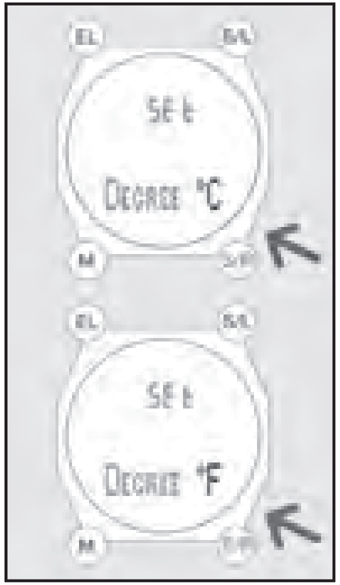
3.4 设置单位

“set alarm”模式下，按 S/R 键进入单位设置模式，然后按 Mode 键确认。

3.4.1 设置度数单位

按 S/R 选择摄氏度或华氏度。

按 Mode 键确认。



3.4.2 设置测压单位

按 S/R 选择毫巴（mBar）或汞柱英寸数（inHg）。

按 Mode 键确认。

3.4.3 设置公制或英制单位

按 S/R 选择米或英尺。

按 Mode 键确认。

3.5 设置　　个人数据

在主设置模式下，按 S/R 键进入个人设置菜单。按 Mode 键依次确认。

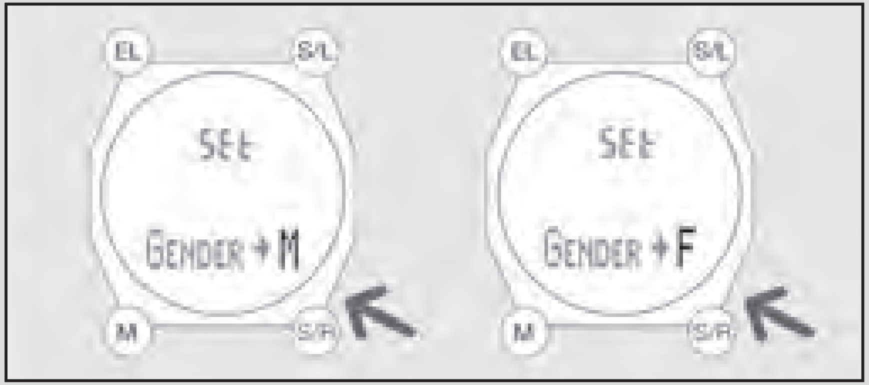
性别（Gender）

选项：

M = 男

F = 女

按 S/R 键进行设置，按 Mode 键保存。



年龄（AGE）

按 S/L 或 S/R 键进行设置

默认年龄：35

年龄范围： 10 – 99 岁



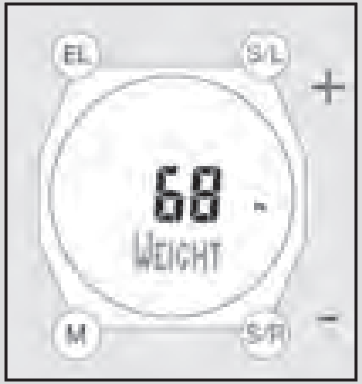
体重（Weight）

按 S/L 或 S/R 键进行设置

默认体重：68 kg

体重范围：20 kg - 227 kg

按 Mode 键依次确认。



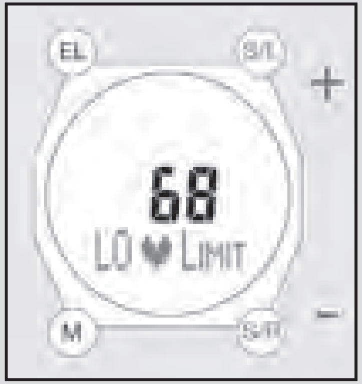
心率上限（HI LIMIT）

按 S/L 或 S/R 键进行设置
默认值：100 bpm
(每分钟心跳次数)
心率范围：41 bpm - 239 bpm
按 Mode 键依次确认。



心率下限（LO LIMIT）

按 S/L 或 S/R 键进行设置
默认值：40 bpm
心率范围：40bpm - 238bpm



3.6 设置计时器（倒计时）

有两个计时器可以设置。
进入“Timer”功能，
长按 Mode 键 2 秒。
设置范围：00:01 – 23:59h
使用 S/L 或 S/R 键进行设置，
按 Mode 键保存。

倒计时开始后，最后 5 秒时会有蜂鸣声进行提示。可重复进行倒计时（repeat on/off）。
或开始第二次倒计时（interleave on/off）。



3.7 设置当前海拔

进入“altimeter”功能，
长按 Mode 键 2 秒。表盘上出现“set alti”，按 Mode 键确认设置。
设置范围：-381 米 到 + 9000 米 或 – 1250 英尺 到 29520 英尺

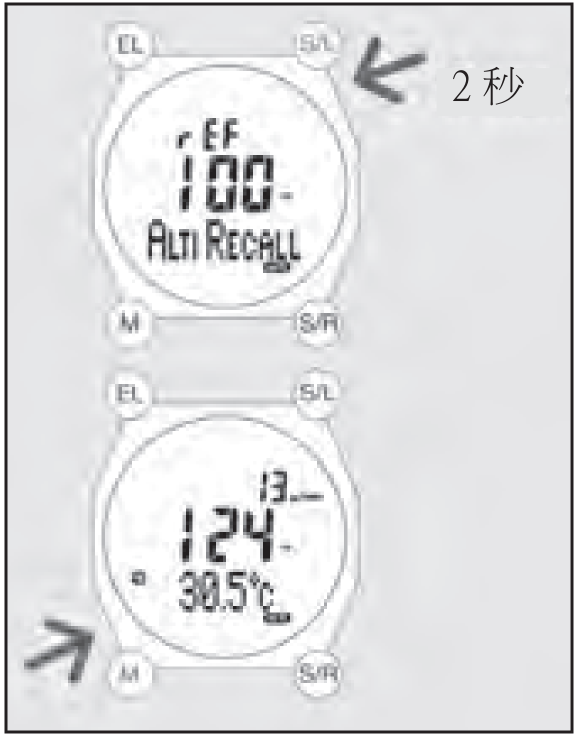
使用 S/L 或 S/R 键进行设置，按 Mode 键保存。
在本设置中可调整另一参考海拔。按 S/L 或 S/R 键进行设置，按 Mode 键保存，然后按 EL 键返回菜单。



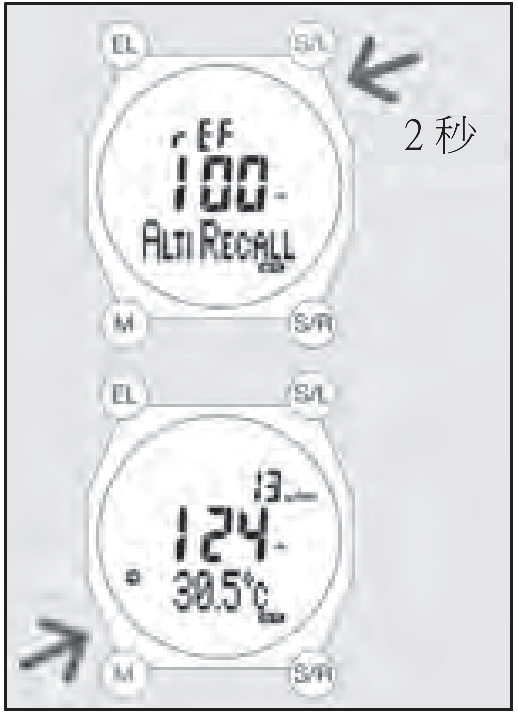
设置测高计提醒

在“set alti”模式下，按 S/R 键进行设置，然后按 Mode 键确认。按 S/L 或 S/R 键设置提醒，按 Mode 键确认。

现在，输入闹钟提醒海拔高度。按 S/L 或 S/R 键进行设置，按 Mode 键确认。



3.8 设置气压计



进入“barometer”功能然后显示出海平面气压。短按 Mode 键可更改数值。按 S/L 或 S/R 键进行数值设置，按 Mode 键确认，然后按 EL 键返回菜单。短按 S/R 键可设置温度。
按 S/L 或 S/R 键进行设置，按 Mode 键确认。

注意：高度和气压之间相互影响，因此如果其中一个的数值改变后，另一数值也会相应改变。

3.9 校准指南针（Compss）

设置手表时，如果您所在位置变化较大，则需要对指南针进行校准（例如当在不同国家旅行时）。

将手表摘下，拿在手中，长按 Mode 键 2 秒，表盘上即显示出“CAL”字样（校准）。然后请按 S/L 键，下表盘位置出现“TURN”字样和3个箭头。水平持表，然后顺时针慢慢旋转（至少 2 次），最后按 S/R 键。如果校准成功，则表盘上会显示“DONE”。如果失败，则显示“RE-CAL”，您需要重新校准。按 EL 键返回指南针模式。



注意：校准时手表需远离磁源（如笔记本电脑）。

现在，**Max out HR** 手表运转准备工作就绪。

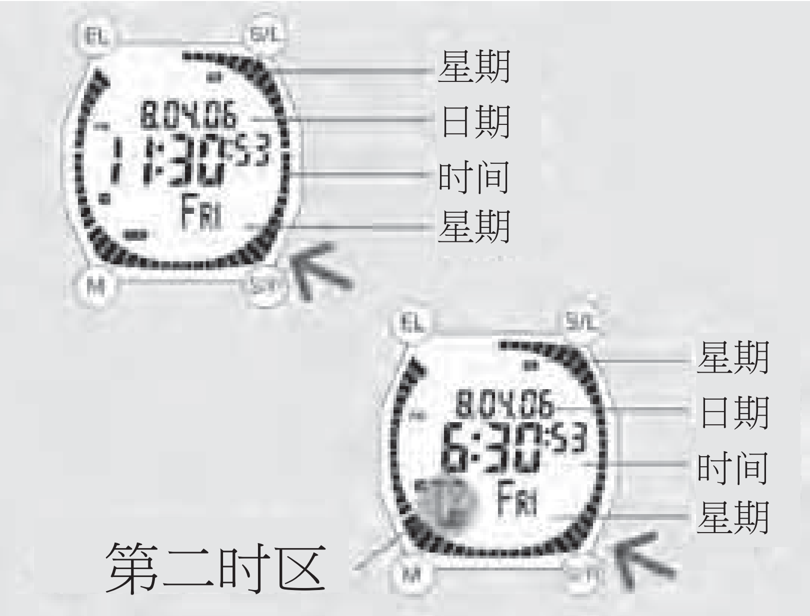
4. 菜单指南

注意： 请确保秒表已打开并开始计时，这样才可以进行计算各子功能值。如果没有，则计算器显示上一次的值。

按 Mode 键可以再次显示所有主功能。按 Stop/Reset 键可再次显示所有次功能。

4.1 时间
手表显示当前时间。数值范围：00:00 — 23:59 或 01:00 — 12:59 AM/PM

日期/星期
上表盘位置显示当前日期（设置为AM/PM mm.dd.yy）。下表盘位置显示星期（MON / TUE / WED/ THU / FRI / SAT / SUN）。



2. 打开第二时区（时间设置子功能）

按 S/R 键，下表盘位置显示第二时区。
长按 S/R 键 2 秒，第二时区将变成当前时间。

设置/取消闹钟（时间设置子功能）

在时间模式下使用闹钟次功能，然后长按 S/R 键 2 秒，可设置或取消闹钟。闹钟图标则相应出现或消失。



4.2 计时器/倒计时

该设置可显示设定的倒计时。通过短按 S/R 键可在倒计时 1 或 2 之间选择。



短按 S/L 键即可开始进行倒计时。倒计时最后为 0，倒数 5 秒时会有嘟嘟声提醒。

到倒计至 0 时，复位为原始时间。
（除非设置为重新倒计时或开始下一次倒计时）。
数值范围：00:01:00 min — 23:59:00 hrs
(可以显示到秒，但不能设置)。

4.3 秒表

短按 S/L 键即可打开秒表开始计时，如需停止，短按 S/R 键即可。秒表打开后，还有某些功能可以使用。如：长按 S/R 键 2 秒即可将秒表清零（以及设置其它仅可在打开秒表后使用的功能）。

如果秒表正在计时，按 S/L 键可保存单圈时间（见下文）。数值范围：0 — 23:59:59 h

单圈时间记录

进入子功能，启动秒表。记录单圈时间可将总时间分为多个时间间隔依次记录。有助于比较完成某项行程或走完某段距离所花的时间。按 S/L 键即可开始并记录。再次按下 S/L 键可闪烁显示 5 秒单圈时间。可停止秒表计时，并显示在上表盘位置。下表盘位置显示单圈时间，中间位置显示记录停止时的各个时间
数值范围：0 — 23:59:59 h

Max out HR 可精确显示到0.01 秒，最高可达 59:59:99。长按 S/R 键 2 秒，即可将秒表清零。

注意：只有记录了第一个单圈时间后，秒表才可在表盘中间位置显示。然后，各单圈时间显示在表盘中间，而正在运行的秒表当前时间将在上表盘位置显示。

单圈时间记录

Max out HR 具有 23:59 小时的记忆/记录容量（或高达 50 个单圈）。在此时长内，高度值将被自动记录（Alti Gain）。

删除秒表值/单圈时间

秒表清零时（长按 S/R 键 2 秒），会删除单圈时间（及其它只在秒表运行时可计算的值）。

Max out HR: 在本功能中，可保存不同的心率信息（例如： 平均心率、最低心率、最佳心率围之内/之外所花时间、消耗热量、脂肪燃烧）。

可在任意单圈记录时阅读此信息，短按 EL 键即可（**Max out HR:** 短按 S/L 键可查看更多保存的信息）。

秒表清零时，所有先前存放的数据也将自动清零。为节省存储空间和电量，24 小时后自动停止记录。

注意：如果秒表停止后，记录未清除，表盘会显示上面所述的读数信息。即显示最近记录的行程时间值而非当前行程时间值。

4.4 测量心率

按压上下表面的传感器即可测量心率，模式不限。（见 1.3）

不要过于用力按压传感器，如果读数成功，会发出嘟嘟提示声。

表盘中间位置显示 5 秒的心率，下表盘位置显示最大心率的百分比。所有数值均会被保存（见“memory”功能）。保存后，表盘显示上一功能。

记忆功能（记录）

Max out HR 最多可保存 50 次心率记录。如不删除，则可一直保存。可用存储空间为零时显示“MEM FULL”字样。此时只可读数不能记录。所存储的数值只能手动删除。



查看心率数据：
可使用“memory”功能查看所有心率值。
记录日期在上表盘位置显示而测试值显示在表盘中间位置。最大心率百分比通过计时器在表盘左下方显示。短按 S/L 或 S/R 键可阅读个别数值。

删除所保存的心率数据：
如需删除数据，需要先进入“memory"模式，然后长按 M 键 2 秒。表盘中间的闪烁数字是可删除的记录数据。按 S/L 或 S/R 键，可翻看所有记录数据。
长按 Mode 键 2 秒即可删除所显示的单圈数据。
如需一次性删除所有数据，进入 memory 模式，长按 M 键 2 秒，再按一下 M 键，此时表盘上显示“All”字样。再次长按 M 键即可一次性删除所有数据！

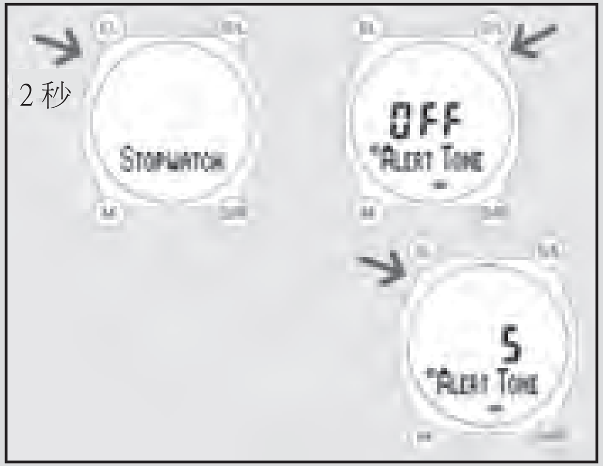
报警/提醒功能
Max out HR
可计算手表使用时发生的热量消耗和脂肪燃烧量。前提是秒表正在运行且已测量了心率。



可设置计时器
提醒自己在固定单圈时间内测量心率。
进入“stopwatch”功能，长按 EL 键 2 秒即可设置闹钟。表盘显示“ALERT TONE”字样，现在您即可设置或取消提示音了。按 S/L 或 S/R 键可选择 5、10、15 分钟一圈，然后按 EL 键确认。
到时间后，会发出提示音并在下表盘位置显示“MEASURE”提示文字，提醒您测量心率。
关闭秒表即可停止提醒。

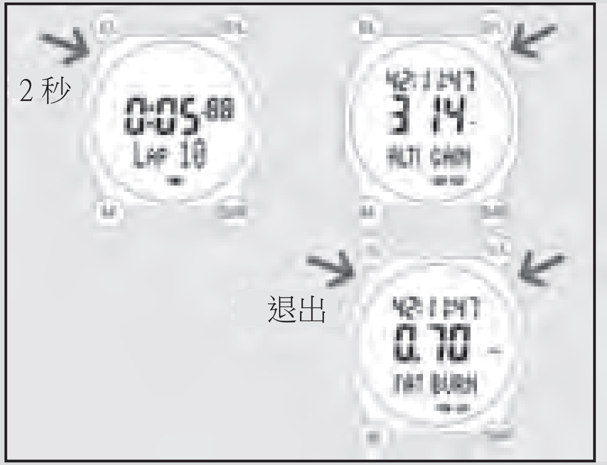
相应圈数记忆

进入 Stopwatch 模式可调出记录数据。停止记录后，将显示总时间或最后一圈时间。按 S/R 键，可在查看不同的单圈记录。



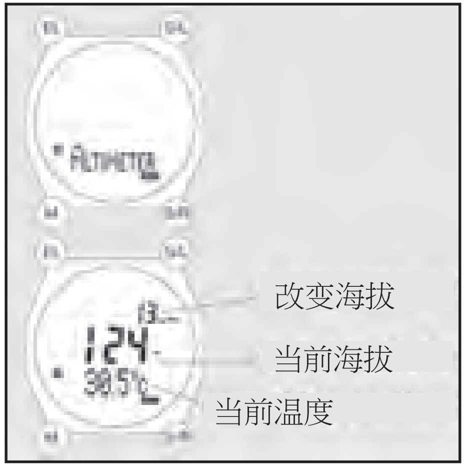
短按 EL 键，可查看单圈的平均心率值。
按 S/L 键可显示一下信息：
- 低于心率下限时所花时间
- 心率区间之内所花时间
- 高于心率上限时所花时间
- 总计最高心率
- 总计平均心率
- 热量消耗值 (Kcal)
- 脂肪燃烧量（FAT BURN）(kg)
- 增加的高度（ALTI GAIN）

按 EL 键，可退出此功能。



4.5 测高计（Altimeter）/测量海拔

该功能显示当前高度（海拔高度）。（海拔高度由气压计算而来，因此海拔与天气具有一定联系）。



数值范围：
-381 到 +9000 米 或
 - 1250 英尺 到
+ 29520 英尺系）。

海拔变化计

上表盘位置显示海拔变化率，单位：
米或英尺/分钟。
手表将当前海拔与上一分钟海拔进行比较，然后算出上升/下降的速率。该数据可能会由于技术原因而延迟显示。数值范围：- / + 0 到 99 米/分钟
 (0 到 299 英尺/分钟)

温度

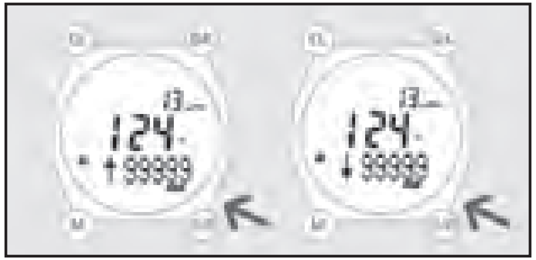
下表盘位置显示当前温度。



注意：所测温度可能会受各种偏差影响，如体温。数值范围
 -10 ℃ 到 60 ℃ 或 14 ℉ 到 +140 ℉

每日上升/下降海拔测量

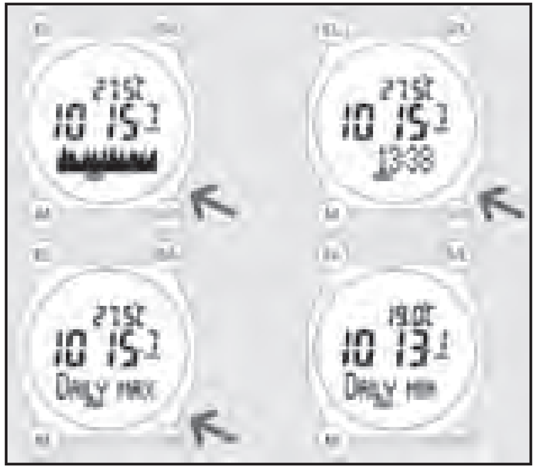
短按 S/R 键可显示以下次功能。



- 时间
- 上升海拔总和
- 下降海拔总和（只有秒表启动后方可计算总和）
- 数值范围：0 到 99999 米 或 0 到 327996 英尺

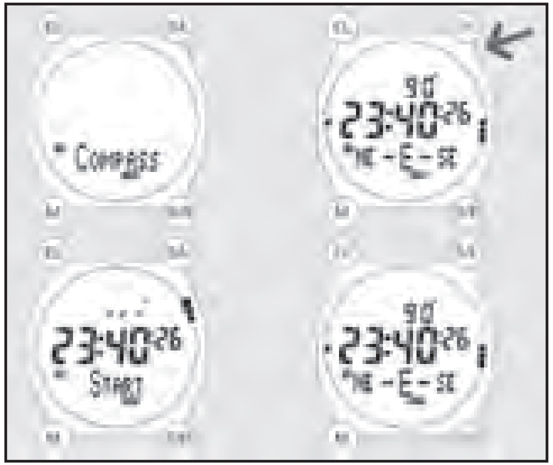
4.6 气压计

当前气压会在中表盘位置显示，单位是mbar 或 inHg。
数值范围：
300 – 1100 mbar
(或 inHg)上表盘位置显示温度值。
下表盘位置以气压柱形式显示过去
22 小时内的气压记录数据。



按 S/R 键，显示以下信息：
- 过去 22 小时的最低气压值和最低温度
- 过去 22 小时的最高气压值和最高温度
- 当前时间

4.7 指南针（Compass）



水平放置手表方可得到正确读数！
中表盘位置显示时间，下表盘位置以字母组合显示方向：NW-N-NE
（西北-北-东北）。
另外表盘外侧一个黑色条块表示为“北”，三个为“南”。一分钟后，手表进入待机模式。再次进入指南针模式，短按 S/L 键即可。

5. 电池更换

更换 **Max out HR** 的电池会导致数据丢失和并消除所有个人设置。借助硬币逆时针方向拧开手表后盖，取出旧电池。

注意：请勿取出电池盒内的金属薄片！

放入一个新的 CR 2032 型号 3 伏锂电池，
电池正极（+）面向金属薄片 。再次拧紧螺丝帽。

请勿过度拧电池盖！

如果更换电池后，显示屏不显示任何数值或显示无法辨认的字符，取出电池，等待 10 秒后再次放入。

6. 维修保养

防止阳光直射、高温和霜冻
（低于 -25 ° C和高于+50℃ ）。

经常用湿布擦净手表。不要把手表放在自来水下冲洗，如果不慎沾水，不要按任何键。本手表不适于在游泳或其它水中活动时佩戴。

7. 故障检修

表盘无反应
- 检查电池

黑屏或显示反应慢
- 温度过高 (50° C 以上)
- 表盘受阳光直射过久
- 温度过低 (-10° C 以下)

子功能无法使用
- 未启动秒表

设置模式无法调出
• 秒表未清零

没有信号
• 关闭蜂鸣器
• 电量不足或已用光

心率测量不显示
• **Max out HR** 没有接触手腕
• 手指可能过凉或过干

8. 质保条款

自购买之日起，我们为原购买者提供一年质保期。

9. 技术资料

Max out HR	本手表不宜在游泳时佩戴，沾水后不要按任何键。
温度:	-10° C 到 +50° C
电池:	CR 2032 锂电池

电池使用寿命取决于经常使用的各个功能。指南针、夜光灯和测心率等功能都比较费电，会大幅缩短电池的使用寿命。

Table of content

1. GENERAL

Congratulations
for buying this advanced multifunctional outdoor watch. Take a moment to read this guide carefully. These resources provide important setup information which are designed to help you get the most from your device.

The **Max out HR** is an outdoor watch which is able to display and calculate: time, temperature, barometric pressure, altitude and compass magnetic direction.

The **Max out HR** offers a current heart rate reading via built-in finger sensors and extra corresponding data in the memory.

1.1 Important information for measuring the barometric altitude

The **Max out HR** watch monitors the current altitude and records the air pressure (of the last 22 hours in half hour steps!) this results in giving you an accurate weather forecast of the next 24 hours. If you depend on an exact weather forecast (for safety reasons) check the official weather forecast; for example online.

Special features of the Max out HR
The **Max out HR** has been built with an extremely precise altimeter and compass sensor. It not only is able to indicate the current altitude, but also the cumulative recorded altitude. This sophisticated altimeter barometric sensor additionally offers detailed information about fluctuations in weather, which can be important for the planning of any outdoor tour.

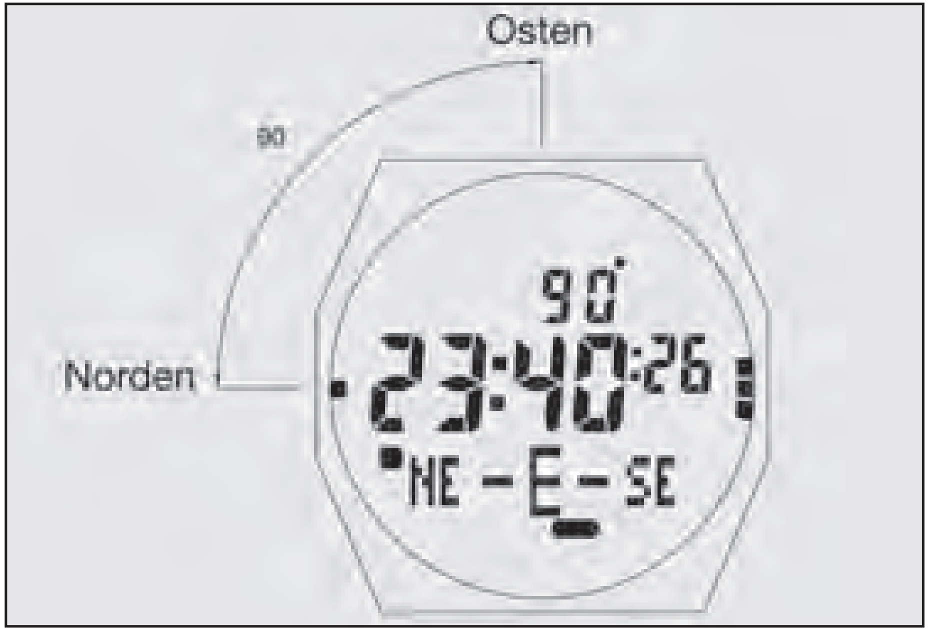
Besides the current air pressure (right end of the dot matrix), the **Max out HR** displays (when in the barometric setting) the time lapsed and the changes in air pressure during the last 22 hours in half hour intervals. From this history, the user can calculate a forecast of the to-be-expected weather. In order to be able to evaluate any

fluctuations of the weather forecast, the **Max out HR** additionally features a very precise thermometer, which is able to show the current temperature at any time.

The digital pressure sensor of the altimeter within the **Max out HR** is state of the art in today's technology. The **Max out HR** pressure sensor is able to save data with its temperature compensation memory. This is because the altitude measurement is determined not only by air pressure, but also by the temperature of the sensor.

Therefore the dependency of the temperature (- 10 to + 50 °C) was simulated in a pressure chamber for every altitude meter (-381 to +9000 m). Here the engineers recorded the data of the temperature related deviations and stored this data on a microchip. The program of this microchip now compensates for the differences in temperature and so enables the calculation of very precise data for both altitude and air pressure.

1.2 The compass is a navigational instrument
for finding directions, using magnetic fields. The magnetic declination varies from place to place, and with the passage of time. Therefore, to improve accuracy, you must adjust the compass the first time and also every time you change your position! (See chapter 3.9)
By using the compass function the bars will appear on the outer side of the face (display) for 1 minute. If you want to see them again, you have to press the S/L key. The bars on the display show the north



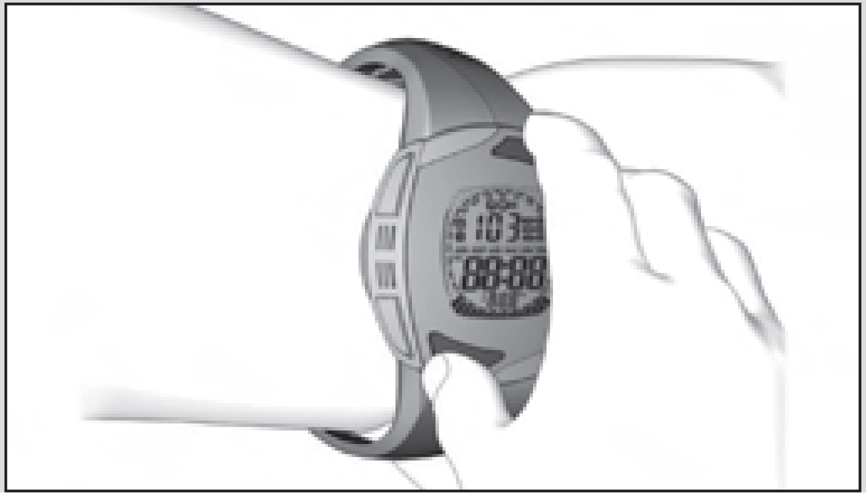
with one bar and the south with three bars. The current direction will be shown at the top of the display in main letters (f. ex. NW-N-NE)
The magnetic declination degree is shown on the upper level. All values include: current position, the angle between the local magnetic field (which is the direction the needle of a compass points) and the true north. The declination is positive when the magnetic north is east of true north.
For instance, “10°” would indicate that the magnetic north lies 10 degrees counter-clockwise from true north.

IMPORTANT: the user has to hold the watch horizontally to get a proper and correct reading!

The **Max out HR** system uses magnetic bearings by default, rather than true bearings, in order to make them more compatible with systems that depend on magnetic fields. It simply calculates the north based magnetic filed in its true position and data tables give the current location of the North Magnetic Pole and (potentially) any local variations. The **Max out HR** displays the time, date, day of the week and the year. Additional features include the alarm clock and the stop watch, which can show the intermediate times as well as the lap times and, finally, offers a countdown function. The display of the **Max out HR** can be lit. This can be initiated by pressing the EL key for 5 seconds.

1.3 Measuring the Heart Rate with the Max out HR finger sensor

IMPORTANT: The watch is a useful tool to monitoring your training and fitness. For safety reasons we suggest to consult your doctor to establish your individual upper and lower heart rate limits. Those wearing pacemakers should not use this device without previously consulting their doctor!



Generally:
The **Max out HR** is an accurate ECG heart rate monitor watch without requiring a chest strap. The reading can be done in every mode and at any time.
IMPORTANT: The watch has to be on your wrist during the measurement step.

1. Place the index finger on the metal upper sensor and your thumb on the lower button on the surface of the watch.
2. Press the buttons gently to activate the sensors and the heart icon will flash on the top of the display.
3. Wait for Heart Rate confirmation (approx. 5 seconds) with a beep sound. The current heart rate shown will let you know when the reading has been taken successfully. If you don't get your heart rate within 30 seconds, moisten finger pads and try again. It helps to wear it for a little while to allow a layer of moisture to build up between the back of the watch and your skin. Do not press too hard on sensors – the beep will confirm that the press was successful. The watch will return to the previous mode 5 seconds after removing your finger pads from the sensors.

The **Max out HR** offers a calorie management system. With a recording you have access to the data of calorie consumed and also the fat burning. The user has to enter his personal data (sex, age, weight, higher and lower heart rate level) and a recording has to be done and also the upper and lower heart rate limit can be set (see chapter 3.5)

2. Getting ready – First steps

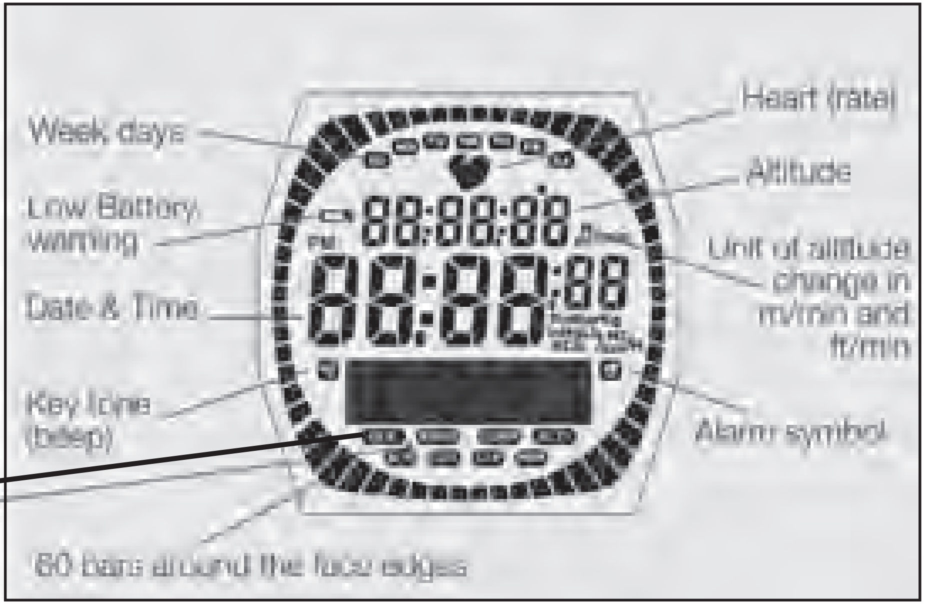
The **Max out HR** is already set in the energy saving mode, i.e. has already been installed, but the display does not show any data yet. The **Max out HR** will immediately be ready for use after pressing any random key.

2.1 Display symbols and their explanations

Clk = Clock
Baro = Barometer
Comp = Compass
Alti = Altimeter
Alm = Alarm
Cdt = Countdown/Timer
Stp = Stop watch
Mem = Memory

2.2 Operating the watch

The display of the **Max out HR** is divided into three areas: an upper, middle and a lower area. In each area the display will show one function at a time, so that 3 functions or 3 sets of data can be read at the same time.



With the Mode key the main functions are called up. With the S/R (Stop/Reset) key sub functions can be displayed. With each pressing of a key there will be a short signal tone (if the key tone/beeper is on!)
The key descriptions are as follows: (see illustration above).

2.3 Special functions of the keys

M = press Mode key
S/L = press Start/Lap key
S/R = press Stop/Reset key
EL = press light key
HR = press Heart Rate buttons until data is shown on display
M2 = press & hold Mode for 2 seconds
S/L2 = press & hold Start/Lap key for 2 seconds
S/R2 = press & hold Stop/Reset key for 2 seconds
EL2 = press & hold the light key for 2 seconds



In the setting mode, pressing the S/L and S/R key will result in changing any functions. S/L will change the data (increasing), S/R (decreasing). By pressing on the buttons longer the speed of change will increase.

START / LAP key
With this key the stopwatch will be activated and laps can be recorded (50 max). It also starts the countdown mode.

STOP / RESET key
With this key the stopwatch can be stopped. When pressing and holding it for 2 sec. it can be reset. Also the lap times and saved data will then be set back to 0.

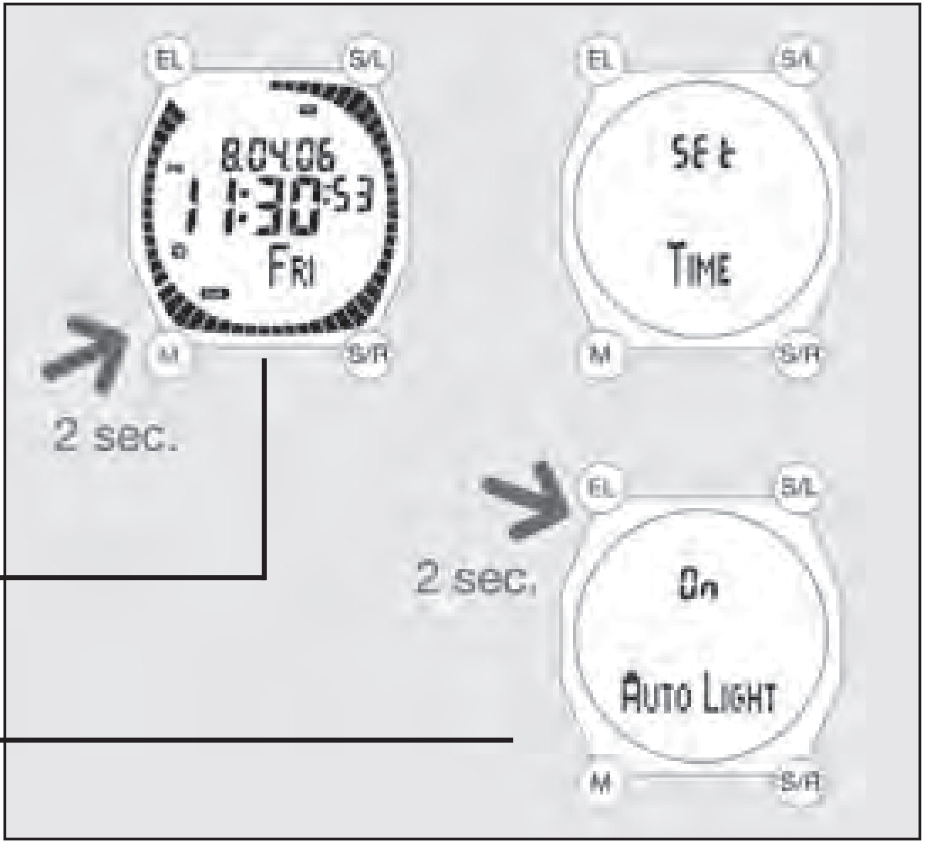
EL key (light)
With this key you can switch on the display light for 5 seconds. Longer pressing will take you to the light manager (see chapter 3.1).
In the setting mode, this key will take you back to the original display.

Mode key
With the mode key you can switch from one setting to the next. After the individual setting the M-key is used to confirm the set data by pressing it again.

Electrodes/Heart rate buttons Max out HR
There are two sensor pads on the top and bottom of the face of the watch. For measuring the heart rate have to be pressed with two fingers simultaneously for approx. 5 seconds. The watch has to be on the wrist during the measurement.

3. Basic setting

Important: To install your watch the stopwatch has to be set to 0.



Setting mode
In each display mode you have to press and hold the M-key for 2 seconds to turn on the main setting mode. Pressing the EL-key will enable you to leave this mode.

Key tone/beeper
When the beeper is activated a small beep icon is shown. To activate/deactivate the beeper press the S/R-key when set in “time” mode. Icon will appear/disappear on the display.

3.1 Light manager

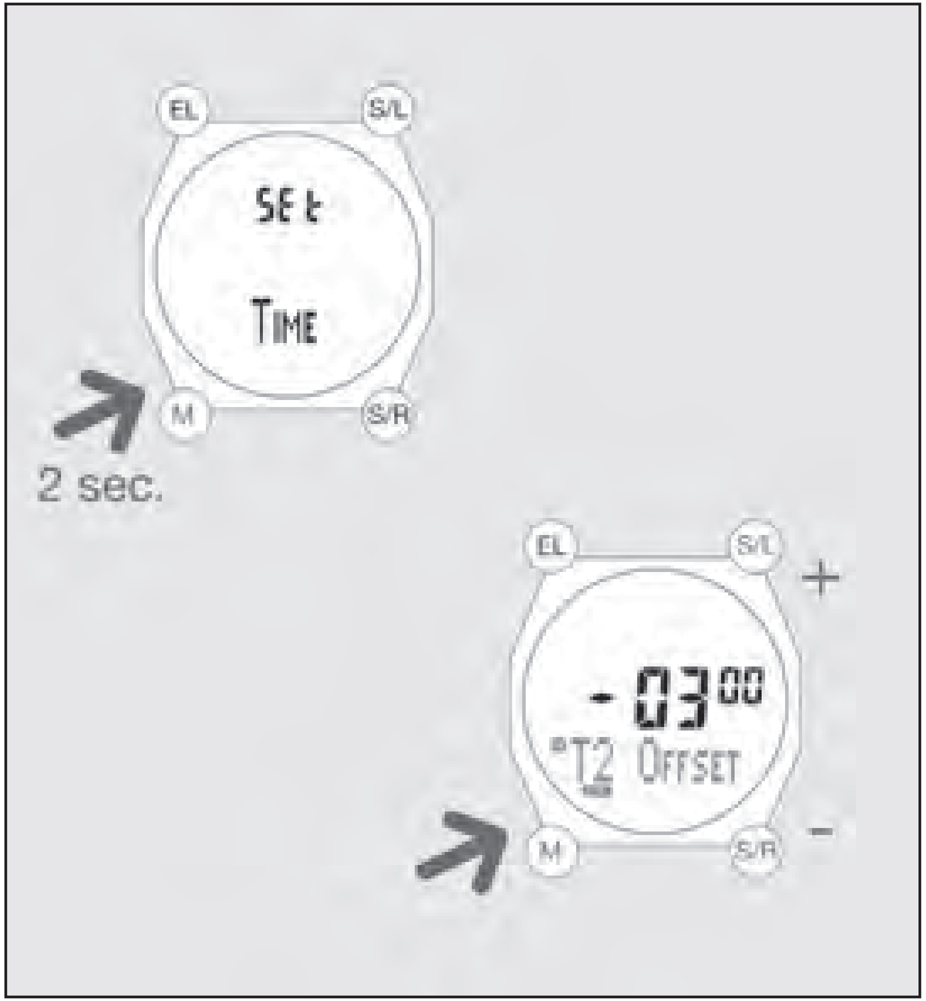
It can be switched ON/OFF by pressing and holding the EL key for 2 seconds. For the next 5 hours (or until you switch the manager off) the display will be lit (for 5 sec.) when pressing any key. By pressing and holding the EL-key for 2 seconds again the 'off auto light' will be shown and the light manager is off!

3.2 Setting the Time & Date

In 'TIME' mode press and hold the M-key for 2 seconds.
NOTE: if you see "RESET STP" you have to stop and reset the stopwatch first and before activating the time mode setting (see chapter 4.3).

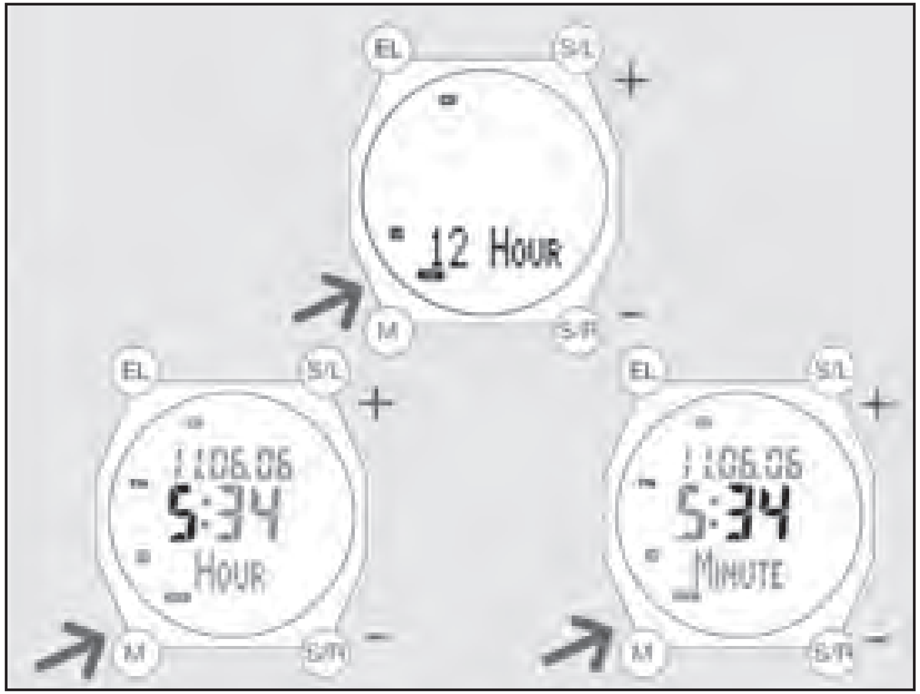
3.2.1 Setting the 2nd time

Press the M-key again. The "T2 offset" allows to set the time difference for a second time zone, in 30 minute intervals (adding/subtracting). Set data by pressing either S/L or S/R key then confirm and go on to the next setting by pressing the M-key.



3.2.2 Setting 24 hours or 12 hours – (am/pm)

By pressing of the S/R key one can chose between the 12/24 displayed time.



3.2.3 Setting the time

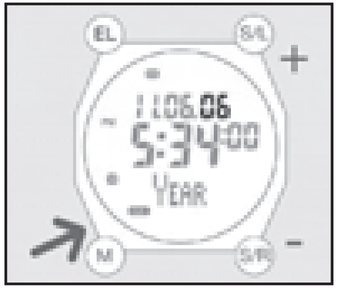
You can set the date and the time after each other. Set with S/L or S/R key, confirm and go on by pressing M-key.

Time

Range of values: = 00:00 - 23:59 or 01:00 - 12:59 AM/PM

Year

Range of values: = 00-99 (2000 – 2099)
Set with S/L or S/R key
Confirm with Mode key



Month

Range of values: = 1-12
Set with S/L or S/R key
Confirm with Mode key

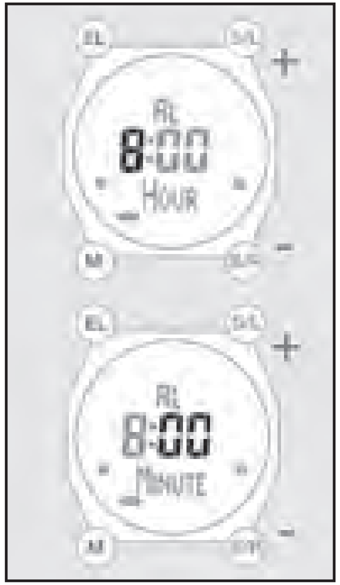


Day
Range of values: = 01-31
Set with S/L or S/R key
Confirm with Mode key



3.3 Setting the alarm

In the “time” mode press the Mode key for 2 seconds until “Set time” appears on the display. Press S/R-key, display will show “set alarm” and confirm with the Mode-key.
Range of values: = 00:00 - 23:59 or 01:00 - 12:59 AM/PM

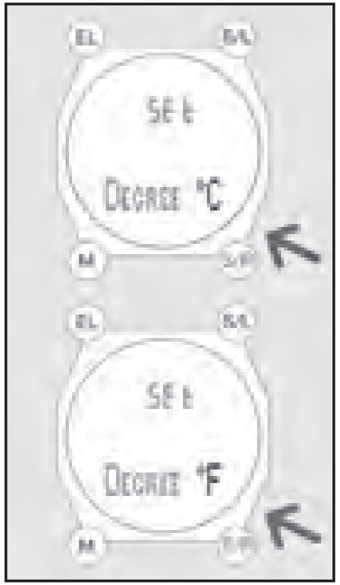


3.4 Setting the units

In the ‘set alarm’ mode press the S/R key to get in the set units mode and confirm with the Mode key.

3.4.1 Setting degree unit

Choose with S/R between °Celsius or °Fahrenheit.
Confirm with the Mode key.



3.4.2 Setting the pressure measurement unit

Choose with S/R between mBar or inHg.
Confirm with Mode key.

3.4.3 Setting metric or imperial unit

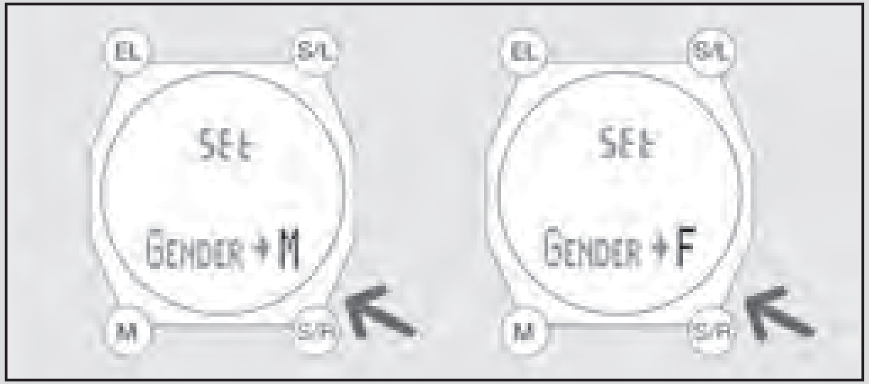
Choose with S/R between meter and feet.
Confirm by pressing the Mode key.

3.5 Setting personal data for the Max out HR

In the main setting mode press the S/R key to get into the personal setting menu.
Always confirm by pressing the Mode key

GENDER

Options:
M = male
F = female
Set with S/R key and save with Mode key.



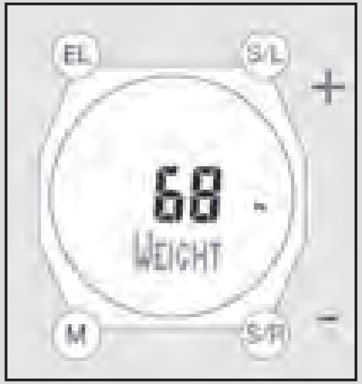
AGE

Switch with S/L or S/R-key
Default setting: 35
Setting range: 10 – 99 years



WEIGHT

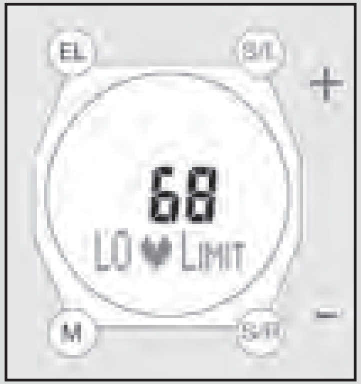
Switch with S/L or S/R-key
Default setting: 68 kg
Setting range: 20 kg - 227 kg
Always confirm by pressing the Mode key



Upper heart rate limit
Switch with S/L or S/R-key
Default setting: 100 bpm (beats per minute)
Setting range: 41 bpm - 239 bpm
Always confirm by pressing the Mode key



Lower heart rate limit
Switch with S/L or S/R-key
Default setting: 40 bpm
Setting range: 40bpm - 238bpm



3.6 Setting the timer (countdown)

There are two timers to set. In the function "Timer" press the Mode key for 2 seconds.
Setting range: 00:01 – 23:59h
Set with S/L or S/R key and save with Mode key.

When the countdown has started, the last 5 seconds will be signalled with the beeper and the countdown can be repeated (repeat on/off). Or the second countdown can be activated (interleave on/off).



3.7 Setting the current altitude

In the "altimeter" function press the Mode key for 2 seconds. "set alti" should appear on the display, confirm this with the Mode key.
Setting range: -381 m to + 9000 m or – 1250 ft to 29520 ft

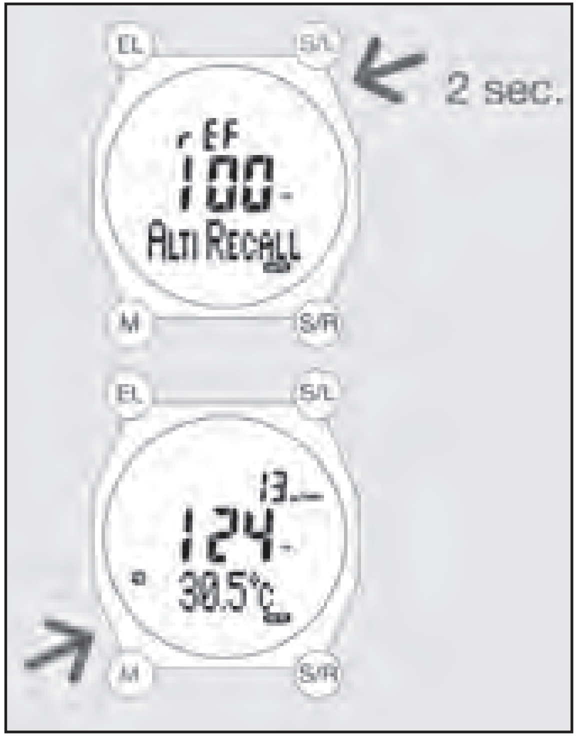
Set with S/L or S/R key and save with Mode key.
In this setting another reference altitude can be adjusted. To do so set with S/L or S/R key and save with the Mode key and return to menu with EL-key.



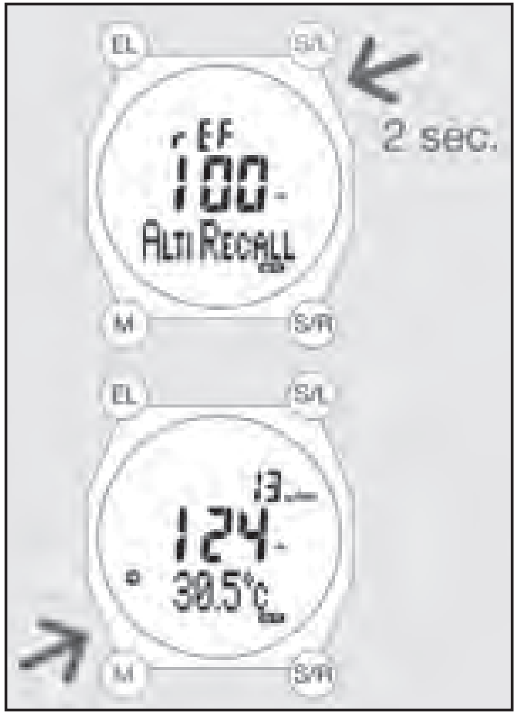
Setting the altimeter alarm

When in "set alti" mode press S/R button and confirm this with the mode key. Set alarm with S/L or S/R key and confirm with Mode key.

Now enter the altitude at which the alarm should sound. Set with S/L or S/R key and confirm with Mode key.



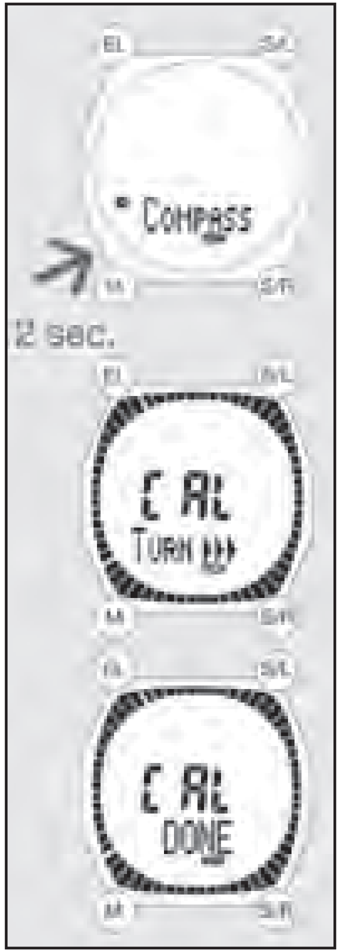
3.8 Setting the barometer



When in the “barometer” function, press the Mode key for 2 seconds. The air pressure reduced to sea level will be shown. Pressing the Mode key shortly the value can be changed. Set value with S/L or S/R key and confirm with Mode key and then return to menu with EL key.
To set temperature press the S/R key (shortly). Set with S/L or S/R key and confirm with Mode key.
Important: The height and the air pressure are dependent on each other and so if one value is adjusted the other value will change.

3.9 Adjusting the compass

When setting up the watch and when majorly changing your position you will have to adjust the compass (for example when travelling in a different country). Take the watch from the wrist and hold it in your hand. Press and hold the Mode key for 2 seconds. ‘CAL’ (calibration) will be shown on the display. Please press the S/L-key. The word ‘TURN’ with 3 arrows will be shown in the lower level. Hold the watch horizontally and turn it clockwise (min. of 2 times) and after doing so press the S/R key. If the calibration was successful ‘DONE’ can be read on the display. If not ‘RE-CAL’ will be shown and you have to do the calibration again. Press the EL-key to get back to the compass mode.



NOTE: Please take care that during the calibration no magnetic source is next to the watch (for example your laptop).

The Max out HR is now ready for operation.

4. MENU GUIDE

Important: Make sure that you **start the stopwatch** so that **the sub functions are able to be calculated**. If you fail to do so, the computer will display the values of your previous tour.

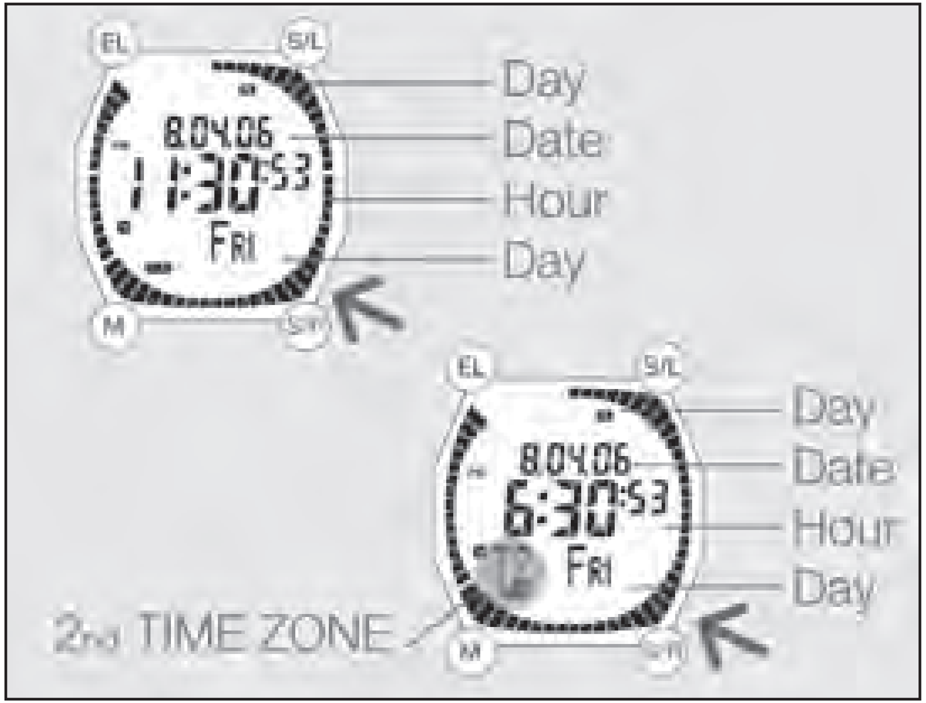
All main functions can be recalled by pressing the Mode-key. All sub functions can be recalled by pressing the Stop/Reset-key.

4.1 Time

Watch displays the current time.
Range of values: 00:00 - 23:59 or 01:00 - 12:59 AM/PM

Date/day of the week

The top level of the display shows the current date (when set to AM/PM mm.dd.yy). The lower level shows the day of the week (MON / TUE / WED / THU / FRI / SAT / SUN).



2. Switching to the 2nd time zone (sub function of time)

By pressing the S/R key the lower level shows the 2nd time zone. By pressing and holding the S/R key for 2 seconds, the 2nd time zone will be set as the current time.

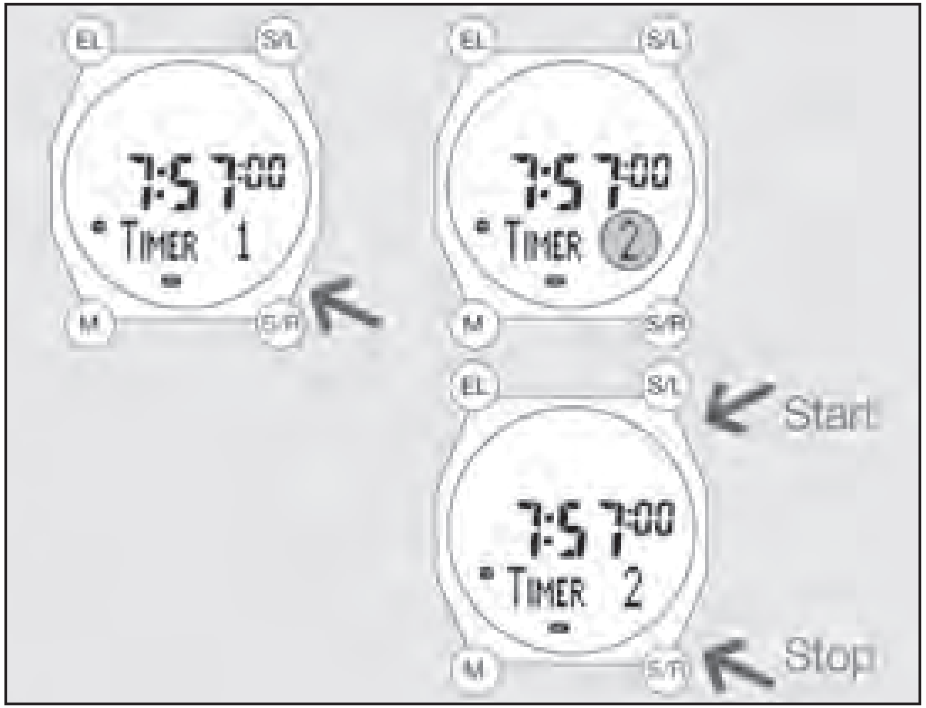
Alarm clock off/on (sub function of time)

The alarm clock can be switched on or off when in the time mode using the alarm sub function then pressing and holding the S/R key for 2 sec. The alarm icon will be shown (on) or invisible (off).



4.2 Timer/Countdown

This setting will show the set countdown time. Via short pressing of the S/R-key can one change in between countdown 1 and 2.



To start the countdown, shortly press the S/L-key. The countdown will go until 0 and the last 5 seconds will be signalled with short beep

tones. When reached 0 the countdown will reset itself to the original time. (Unless set to start again or will begin the second countdown). Range of values: 00:01:00 min - 23:59:00 hrs (seconds will be displayed but can not be set).

4.3 Stopwatch

To start the stopwatch, shortly press the S/L-key and to stop its function, shortly press the S/R-key.
Other functions can be utilized even though the stopwatch has been turned on. Press the S/R-key for 2 seconds to set the stopwatch (and any other functions which can only be used if the stopwatch is turned on) to zero.

If the stopwatch is running, by pressing the S/L-key one can save individual lap times (see below).
Range of values: 0 - 23:59:59 h

Lap time

Go into the sub function to activate the stopwatch. Recording the lap time will help break down the total time which has been recorded into smaller time breaks. It can help compare your time taken to complete a certain tour/distance. It will start and record when pressing the S/L button. Pressing the S/L-key again will display the lap time (blinking) for 5 seconds. The stopwatch can be stopped and will be displayed in the upper display level. The lower display level shows the lap times and the middle level will display the individual times which where recorded when stopped.
Range of values: 0 - 23:59:59 h

The **Max out HR** will show hundredths of a second until 59:59:99. By pressing the S/R-key for 2 seconds, the stop watch will be reset to zero.

Attention: The stopwatch will be displayed in the middle of the display until the first lap time is recorded. After this each lap time will be shown in the middle of the display and then current time of the running stopwatch will be displayed on the top level of the display.

Lap time recording

The **Max out HR** have a memory/recording capacity of 23:59 hours (or max 50 laps). During this time span, the altimeter will be automatically recorded (Alti Gain).

Deleting stopwatch values/lap times

The lap times (and all other values which are only calculated when the stopwatch is running) will be deleted when stopwatch is set back to zero (by pressing S/R key for 2 sec.)

Max out HR: in this functions various heart rate information will be saved (example: average heart rate, maximum heart rate, time spent within/out of the optimum heart rate limits, calories lost, fat burning)

This data can be read during any specific lap time. To do so shortly press the EL-key (**Max out HR**: the additional data saved can be viewed by shortly pressing the S/L-key).When the stop watch is reset to 0, all previous data will automatically be reset to zero. In order to save memory space and battery power, the recording will stop automatically after 24 hours.

NOTE: if the recording is not cleared after the Stop watch is stopped, the display will show the indications mentioned above. This means the values of the last recorded tour, not of the current tour.

4.4 Measuring Heart Rate

You can measure your heart rate in every mode of the watch by pressing the sensors on the top and bottom of the watch surface. (see chapter 1.3).

Do not press too hard on sensors – a beep will confirm a successful reading.

The middle of the display will show the heart rate for 5 seconds and the lower part of the display will present the percentage of your maximum hart rate. All values will be saved (see "memory" function) and after this the display shows the previous function.

Memory function (recording)

The **Max out HR** is able to save up to max. 50 heart rate recordings. It will be stored until it's erased. "MEMFULL" will appear on the display when full.The reading can be done but no recording will take place. The values stored within the memory can only be erased manually.



Viewing the heart rate data:

All heart rate values can be viewed in the “memory” function. The date will be given at the top and the measured values can be read in the middle. The percentage of the maximum heart rate will be displayed, using a counter, bottom left of the display. Individual values can be read by shortly pressing the S/L-key / S/R-key.

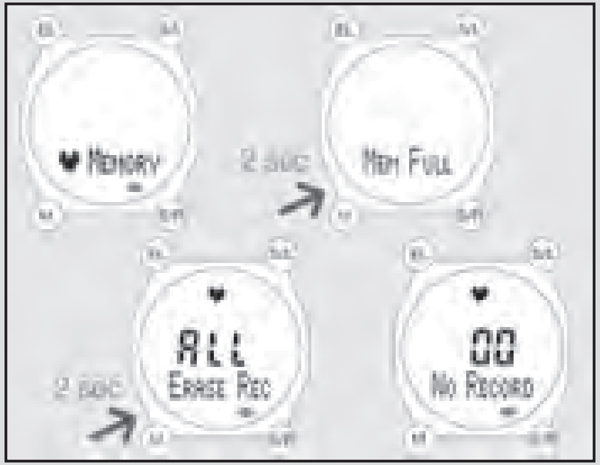
Deleting stored heart rate data:

To erase the data you have to be in “memory mode”. Press and hold the M-key for 2 seconds. The blinking number displayed in the middle level of the display shows the recorded data which can be erased. With the S/L or S/R-key you can switch between the recorded data.

By pressing and holding the mode key for 2 seconds the shown data of the lap will then be erased. To erase all data at once, go into memory mode and hold the M-key for 2 seconds. Press the M-key again. “All” will be shown and by pressing and holding the M-key all data will be erased at once!

Alert/Reminder function

The **Max out HR** is able to count the calorie consumption and the fat burning which takes place during its use. This can only take place if the stopwatch is running and the heart rate is measured.

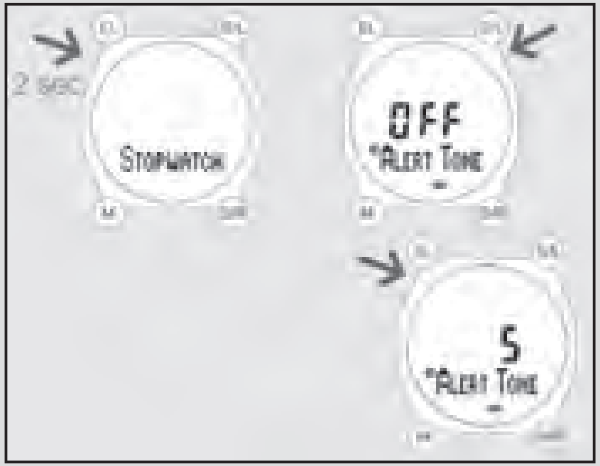


A timer can be set to remind you to take your heart rate measurements in regular time laps.

To set this alarm, go into the “stopwatch” function, press EL-key for 2 seconds. Display will show “ALERT TONE”, now you can set the alert tone ON or OFF. Now you can choose between time laps of 5, 10, 15 minutes by pressing the S/L or S/R-key and confirm by pressing the EL-key. A beep tone and a short ‘MEASURE’ note on the lower level of the display will remind you to measure the heart rate until you stop the stopwatch.

Memory of the Corresponding Lap

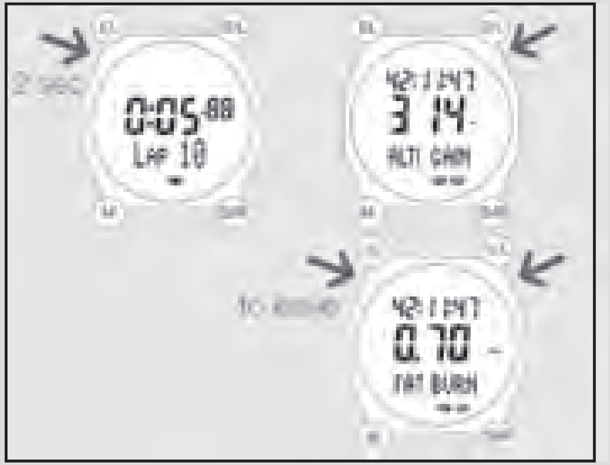
To recall the recorded data go to the Stopwatch mode. After stopping the recording the total time or the last lap will be shown. By pressing the S/R-key you can switch between the different laps.



To see the average heart rate values of each lap shortly press the EL-key. Press the S/L-key to show the following data:

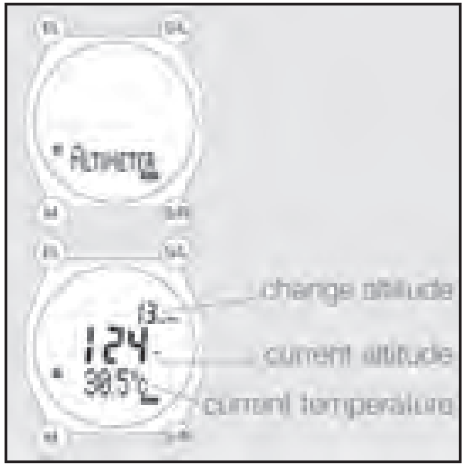
- Time spent below the lower heart rate limit
- Time spent in heart rate zone
- Time spent above over the upper heart rate limit
- Over all max. heart rate (total)
- Over all average heart rate (total)
- Calorie consumption (Kcal)
- Fat burning (kg)
- Altimeter gained

To leave this function press the EL-key.



4.5 Altimeter / Measuring the altitude

This function shows the current altitude (above sea level).
(As the altitude is calculated by measuring the air pressure, there is a correlation to the weather).
Range of values: -381 to +9000 m - 1250 ft to + 29520 ft



Variometer

The upper level of the display shows the changing rate of altitude in meters/feet per minute. The watch will now compare the current height with the height from the past minute and so is able to calculate rate one is ascenting/descenting. The data will be displayed delayed due to technical factors.
Range of values: - / + 0 to 99 m/min (0 to 299 ft/min)

Temperature

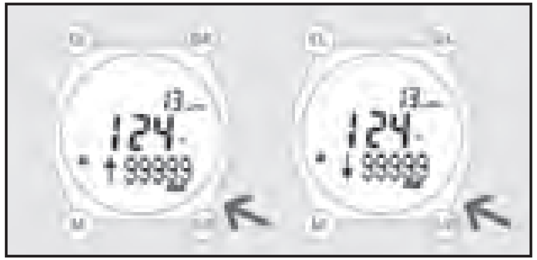
The lower level of the display will show the current temperature.



NOTE: The measured temperature can be subject to deviations, e.g. body temperature
Range of values: -10 °C to +60 °C or 14 °F to +140 °F.

Daily measurements of ascents/descents

By shortly pressing the S/R-key the following sub functions will be shown:



- Time
- Sum of covered meters of altitude up
- Sum of covered meters of altitude down (the sums will only be calculated if the stopwatch is on)

Range of values: 0 to 99999 m or 0 to 327996 ft

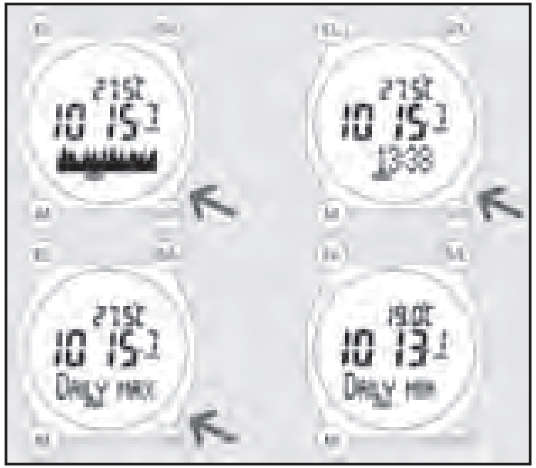
4.6 Barometer

The current air pressure will be displayed in the middle level of the display in either mbar or inHg.

Range of values:

300 – 1100 mbar (or inHg)

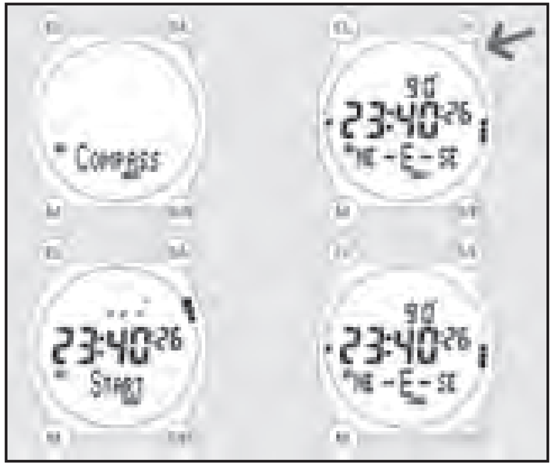
The upper level shows the temperature. The lower level shows a graph with the recorded data of air pressure over a period of the last 22 hours.



Pressing the S/R-key, following data will be shown:

- minimum air pressure of the last 22 hours and min. temperature
- maximum air pressure of the last 22 hours and max. temperature
- current time

4.7 Compass



Hold watch horizontally to get a proper reading!

The time is shown in the mid display level and the lower level shows direction in letter combinations such as: NW-N-NE (northwest-north-northeast)

Additionally will a single bar indicate “north” at the edge of the display, 3 bars indicate “south”. After one minute the watch will go into standby mode. To reactivate the compass mode, shortly press the S/L key.

5. Replacing the battery

Changing the battery in the **Max out HR** will result in data loss and all personal settings will be eliminated. Unscrew the back of the watch counter-clockwise with aid of a coin to remove the old battery.

Important: Do not remove the foil in the battery case!

Insert a new 3-volt lithium battery type CR 2032 with the plus pole (+) facing up underneath the foil. Close screw cap again.

Do not over twist battery cap!

If after the battery change the display does not show any values or unidentifiable characters, remove the battery and wait 10 seconds before inserting the battery again.

6. Maintenance and care

Protect against direct sunlight, heat and frost (below -25° C and above +50° C).

Clean the watch from time to time with a damp cloth. Do not hold under running water and when in contact with water avoid pressing any buttons.
This watch is not suitable for swimming or any other water sport activities.

7. Trouble shooting

No activity on the display
• check battery
Black display or slow display reaction
• temperature is too high (above 50° C)
• display was exposed too long to direct sunlight
• temperature is too low (below -10° C)
No indications of sub functions
• Stopwatch is not activated

Setting modus can not be accessed

- Stopwatch has to be reset to zero

No Signal

- Switch off beeper
- Battery is low / empty

Heart rate measurements not displayed

- Max out HR has to be in contact with wrist
- Fingertips could be too cold or too dry

8. Guarantee terms

From the purchase date forward we offer original purchaser a guarantee of 1 years.

O-Synce Europe GmbH
Thaddenstrasse 14 A,
69469 Weinheim,
Germany.
Tel: 49-6201-8432667
Fax: 49-6201-8432669

9. TECHNICAL DATA

Max out HR	This device is not suitable for swimming; when in contact with water do not press any buttons.
Temperature:	- 10° C bis + 50° C
Battery:	CR 2032 lithium

The lifespan of the battery depends on which functions are used the most. Functions such as the compass, light and heart rate cost more battery power and so shorten its lifespan more drastically.